

CLAIMS

We claim:

1. An ultrasonic surgical instrument defining a proximal end and a distal end and comprising:
an asymmetric blade positioned at the distal end of the instrument; and
a lumen having a distal end positioned in an overlapping relationship with the blade.
2. The ultrasonic surgical instrument of claim 1, wherein the lumen provides suction to remove fluid, debris, or vapors from a surgical field.
3. The ultrasonic surgical instrument of claim 1, wherein the lumen provides irrigation fluid to a surgical site.
4. The ultrasonic surgical instrument of claim 1, wherein the distal end of the lumen is moveable.
5. The ultrasonic surgical instrument of claim 1, wherein the blade is designed to vibrate in a longitudinal mode coupled with either a transverse or torsional mode.
6. The ultrasonic surgical instrument of claim 7, wherein the lumen is fixed in a position adjacent to the transverse or torsional node.
7. The ultrasonic surgical instrument of claim 7, wherein the lumen is movable to a position adjacent to the transverse or torsional node.
8. The ultrasonic surgical instrument of claim 6, wherein the transverse or torsional node facilitate debris or fluid removal in conjunction with suction.

9. The ultrasonic surgical instrument of claim 1, wherein the lumen is movable distally of the blade distal end.
10. The ultrasonic surgical instrument of claim 1, wherein the lumen is movable radially with respect to the blade.
11. The ultrasonic surgical instrument of claim 1, wherein the proximal end of the surgical instrument incorporates controls for suction and or irrigation functionality.
12. The ultrasonic surgical instrument of claim 1, wherein the blade defines a channel.
13. The ultrasonic surgical instrument of claim 12, wherein the channel directs debris and/or fluids toward the lumen for removal with suction.
14. The ultrasonic surgical instrument of claim 12, wherein the channel directs irrigation fluid from the lumen to the surgical site.
15. The ultrasonic surgical instrument of claim 12, wherein the channel directs provides support or constraint to the lumen.
16. An ultrasonic surgical instrument defining a proximal end and a distal end and comprising:
 - A blade symmetric in at least one plane positioned at the distal end of the instrument; and
 - at least one lumen positioned in an overlapping relationship with the blade.
17. The ultrasonic surgical instrument of claim 16, wherein the lumen provides suction to remove fluid, debris, or vapors from a surgical field.
18. The ultrasonic surgical instrument of claim 16, wherein the lumen provides irrigation fluid to a surgical site.

19. The ultrasonic surgical instrument of claim 16, wherein the distal end of the lumen is moveable.
20. The ultrasonic surgical instrument of claim 16, wherein the blade is designed to vibrate in a longitudinal mode coupled with either a transverse or torsional mode.